

Applicant: Friedrich BOECKING
Docket No. R.306611
Preliminary Amdt.

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-8. (Canceled)

9. (New) In a fuel injector having a piezoelectric actuator directly actuating an injection valve member, which piezoelectric actuator acts on a booster piston, and a face end of the booster piston acts on a hydraulic coupling chamber for actuating the injection valve member, and the piezoelectric actuator is received in a hollow chamber in the injector housing, which hollow chamber is filled with a fuel volume that is under high pressure, the improvement wherein the diameter (d2) of a sealing edge in the actuator base region corresponds to the diameter (d1) of the booster piston.

10. (New) The fuel injector in accordance with claim 9, wherein the piezoelectric actuator, on its head region, is solidly joined to the booster piston.

11. (New) The fuel injector in accordance with claim 9, wherein the face end of the booster piston, acting on a hydraulic coupling chamber, forms a larger hydraulically operative face than a face end of the injection valve member defining the hydraulic coupling chamber.

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12. **(New)** The fuel injector in accordance with claim 10, wherein the face end of the booster piston, acting on a hydraulic coupling chamber, forms a larger hydraulically operative face than a face end of the injection valve member defining the hydraulic coupling chamber.

13. **(New)** The fuel injector in accordance with claim 9, wherein the piezoelectric actuator is surrounded by a potting material.

14. **(New)** The fuel injector in accordance with claim 9, wherein the hollow chamber in the injector housing surrounding the piezoelectric actuator acts on a nozzle chamber inlet extending to a nozzle chamber.

15. **(New)** The fuel injector in accordance with claim 10, wherein the hollow chamber in the injector housing surrounding the piezoelectric actuator acts on a nozzle chamber inlet extending to a nozzle chamber.

16. **(New)** The fuel injector in accordance with claim 11, wherein the hollow chamber in the injector housing surrounding the piezoelectric actuator acts on a nozzle chamber inlet extending to a nozzle chamber.

17. **(New)** The fuel injector in accordance with claim 9, wherein electrical terminals for supplying current to the piezoelectric actuator are guided by a threaded portion located above the actuator base region.

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18. **(New)** The fuel injector in accordance with claim 10, wherein electrical terminals for supplying current to the piezoelectric actuator are guided by a threaded portion located above the actuator base region.

19. **(New)** The fuel injector in accordance with claim 11, wherein electrical terminals for supplying current to the piezoelectric actuator are guided by a threaded portion located above the actuator base region.

20. **(New)** The fuel injector in accordance with claim 13, wherein electrical terminals for supplying current to the piezoelectric actuator are guided by a threaded portion located above the actuator base region.

21. **(New)** The fuel injector in accordance with claim 14, wherein electrical terminals for supplying current to the piezoelectric actuator are guided by a threaded portion located above the actuator base region.

22. **(New)** The fuel injector in accordance with claim 9, wherein the a sealing edge, cooperating with a beveled portion of the injector housing and embodied in the base region of the piezoelectric actuator seals off the hollow chamber, which is filled with a fuel volume at high pressure, from the threaded portion.

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23. (New) The fuel injector in accordance with claim 10, wherein the a sealing edge, cooperating with a beveled portion of the injector housing and embodied in the base region of the piezoelectric actuator seals off the hollow chamber, which is filled with a fuel volume at high pressure, from the threaded portion.

24. (New) The fuel injector in accordance with claim 11, wherein the a sealing edge, cooperating with a beveled portion of the injector housing and embodied in the base region of the piezoelectric actuator seals off the hollow chamber, which is filled with a fuel volume at high pressure, from the threaded portion.

25. (New) The fuel injector in accordance with claim 13, wherein the a sealing edge, cooperating with a beveled portion of the injector housing and embodied in the base region of the piezoelectric actuator seals off the hollow chamber, which is filled with a fuel volume at high pressure, from the threaded portion.

26. (New) The fuel injector in accordance with claim 9, wherein the piezoelectric actuator, above a connecting face with the booster piston, has a constricted portion.

27. (New) The fuel injector in accordance with claim 10, wherein the piezoelectric actuator, above a connecting face with the booster piston, has a constricted portion.

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28. (New) The fuel injector in accordance with claim 11, wherein the piezoelectric actuator, above a connecting face with the booster piston, has a constricted portion.